

REMARKS

The Examiner rejected Claims 13 and 15-18 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication No. 2003/0195275 to Sanada, et al. ("Sanada") in view Japanese Patent No. 2001-081372 to Ikemoto, et al. ("Ikemoto"). The Examiner rejected Claims 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Sanada in view of Ikemoto and U.S. Patent No. 6,871,941 to Horii, et al. ("Horii").

Claims 1-13 and 15-20 are now pending. Claims 1-12 are currently withdrawn. The following remarks are considered by applicant to overcome each of the Examiner's outstanding rejections to current Claims 13 and 15-20. An early Notice of Allowance is therefore requested.

I. SUMMARY OF RELEVANT LAW

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The determination of obviousness rests on whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. In determining obviousness, four factors should be weighed: (1) the scope and content of the prior art, (2) the differences between the art and the claims at issue, (3) the level of ordinary skill in the art, and (4) whatever objective evidence may be present. Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor. The Examiner carries the burden under 35 U.S.C. § 103 to establish a prima facie case of obviousness and must show that the references relied on teach or suggest all of the limitations of the claims.

II. REJECTION OF CLAIMS 13 AND 15-18 UNDER 35 U.S.C. §103(A) BASED ON SANADA IN VIEW OF IKEMOTO

On page 2 of the current Office Action, the Examiner rejects Claims 13 and 15-18 under 35 U.S.C. § 103(a) as being unpatentable over Sanada in view of Ikemoto. These rejections are respectfully traversed and believed overcome in view of the following discussion.

A. The Examiner Already Issued and Subsequently WITHDREW This Rejection

As an initial matter, the Examiner had previously rejected Claims 13 and 15-18 over Sanada in view of Ikemoto in the previously issued Final Office action dated November 27, 2006. After which, Applicants filed a response on March 14, 2007, and then an Appeal Brief on June 22, 2007. In view of the filed Appeal Brief, the Examiner reopened the prosecution of the case in view of a new rejection of Claims 13 and 15-18.

We respectfully assert that the Examiner's rejections of Claims 13 and 15-18 over Sanada in view of Ikemoto are just as deficient now as they were then. Further, we object to Examiner prolonging the prosecution of this case by rehashing rejections that Examiner himself already has determined is deficient (as evident by Examiner's prior withdrawing of this very rejection in favor of reopening the prosecution of this case).

B. Arguments Previously Presented by Applicant, Which Examiner Determined Sufficient to Withdraw the Rejection and Reopen Prosecution

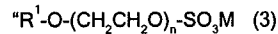
Claim 13 states:

"A water base ink for ink-jet recording comprising:

"a self-dispersible coloring agent;

"a propylene glycol ether; and

"a surfactant represented by the following general formula (3):



"wherein n represents an integer of 2 to 4, R¹ represents an alkyl group having a number of carbon atoms of 12 to 15, and M represents Na or triethanolamine; and

"wherein the propylene glycol ether is **dipropylene glycol propyl ether**." (emphasis added).

The Examiner asserts that Sanada discloses a propylene glycol ether at paragraph [0076]. However, the only glycol ethers disclosed by Sanada are ethylene glycol monomethyl (or ethyl) ether, diethylene glycol monomethyl (or ethyl) ether, and triethylene glycol monomethyl (or ethyl) ether. These are all ethylene-glycol ethers. **None** of them are propylene-glycol ethers, let alone dipropylene glycol propyl ether. Accordingly, the combination of Sanada and Ikemoto fails to teach or suggest all of the limitations of Claim 13.

The Examiner has failed to address this deficiency of the references in the Examiner's Advisory Action dated April 10, 2007, or in the current Office Action. As such, Applicants respectfully assert that, **for this reason alone**, the Examiner has failed to establish a prima facie case of obviousness of independent Claim 13.

In addition, the Examiner admits that Sanada fails to disclose a surfactant represented by the Formula (3) of the current application. As a result, the Examiner cites to Ikemoto for the disclosure of Formula (3). However, the teachings of Ikemoto are directed to an ink containing a **non-self-dispersible coloring agent** (i.e., a pigment), while Claim 13 contains a **self-dispersible coloring agent**. See Ikemoto, Abstract. Non-self-dispersible coloring agents behave very differently from dispersible coloring agents. Surfactants that work well with non-dispersible coloring agents do not necessarily work well with dispersible coloring agents.

In fact, Ikemoto specifically states that the polyoxyethylene alkyl ethereal sulfate derivative disclosed is included **solely** to disperse the pigment. This is made abundantly clear by Ikemoto's abstract, which states that the subject composition where the **fine-particle dispersed** system is obtained by including pigments, and **a dispersant composed of the disclosed polyoxyethylene alkyl ethereal sulfate derivative**. As such, the disclosed polyoxyethylene alkyl ethereal sulfate derivative is included **solely** to **disperse** the pigment.

Contrasting Ikemoto, the surfactants disclosed in Sanada are **not** included as dispersants, as the ink of Sanada contains a **self-dispersing pigment**. Sanada, P. 2, ¶ [0013]. Moreover, there is no suggestion in either Sanada or Ikemoto that the polyoxyethylene alkyl ethereal sulfate derivative disclosed in Ikemoto (intended for use with a **non-self-dispersible coloring agent**) is substitutable for the surfactants disclosed in Sanada (intended for use with a **self dispersible coloring agent**). As a result, one of ordinary skill in the art would find (1) no motivation to combine the teachings of Ikemoto with those of Sanada and (2) no reasonable expectation of success of combining the teachings of Ikemoto with those of Sanada.

The Examiner previously asserted, in the Advisory Action dated April 10, 2007, that it is obvious to combine Sanada and Ikemoto because Sanada discloses a self-dispersing pigment and Ikemoto discloses a pigment and a dispersant compound. However, Examiner's logic on this matter is flawed. **Ikemoto** clearly teaches dispersing a **non-self-dispersible pigment** by using a dispersant. **Sanada**, on the other hand, teaches the use of a **self-dispersing pigment**. Once the pigment is self-dispersing, there is **no** need to use a dispersing agent. Therefore, there is **no** reason to combine the dispersant of Ikemoto with the ink compositions of Sanada. Moreover, even if there were a motivation, which Applicants contend there is not, the

combination of the references would still fail to teach all of the elements of Claim 13. In particular, the Examiner asserts that Ikemoto teaches a self-dispersing pigment. Even if this were correct, Ikemoto fails to teach **combining** a self-dispersing pigment with a dispersant. Claim 13 clearly states that the ink has “a self-dispersible coloring agent” **and** “a surfactant represented by the following general formula (3)”. Ikemoto fails to teach or suggest such a combination. Therefore, the Examiner cannot show a motivation to combine “a dispersible coloring agent” with “a surfactant represented by the following general formula (3)”, or that there is a reasonable expectation of success of the combination of Ikemoto with Sanada.

C. Additional Explanation as to Why the Cited References CANNOT Be Combined to Arrive At the Claimed Invention

As discussed above, the Examiner cannot show a motivation to combine “a dispersible coloring agent” with “a surfactant represented by the following general formula (3)”, or that there is a reasonable expectation of success of the combination of Ikemoto with Sanada.

In addition, it is apparent that Ikemoto’s surfactant mainly functions as the **dispersant** of the pigment in the water. Accordingly, the surfactant of Ikemoto relates to a **non**-self-dispersible coloring agent (i.e., pigment). Thus, one of ordinary skill in the art would find **no motivation** to use the surfactant of Ikemoto together with a self-dispersible pigment, **because a self-dispersible coloring agent generally does *not* require any dispersing agent.**

Therefore, a person skilled in the art would **not** have been motivated to use the surfactant of Ikemoto together with Sanada that teaches to use a self-dispersible pigment.

Furthermore, Sanada does not teach that **any kind** of surfactant can be used, but rather discloses examples of **specific** surfactants which can be used. As anyone of skill in the art

knows, **not** just **any kind** of surfactant can be used. Rather, a surfactant must be selected which **specifically** works with the other chemicals in your composition so as to produce the desired results.

In this way, chemistry similar to baking. For example, a first cookie recipe may call for butter, sugar, flour, and salt, while a second cookie recipe may call for butter, sweetened chocolate, flour, and salt. One of ordinary skill in baking would know that you cannot add the sugar from the first cookie into the second cookie and obtain a desirable result. This is because the second cookie **already** uses **sweetened** chocolate. Therefore, the addition of more sweetener (i.e., sugar), would be very undesirable.

What the Examiner is attempting to do is basically mix the sugar from the first cookie with the ingredients of the second cookie. In other words, the Examiner is adding the surfactant of Ikemoto, the sole purpose of which is to disperse the **non-self-dispersible** coloring agent, with the composition (i.e., “ingredients”) of Sanada, which does not need a surfactant which acts as a dispersant because it already includes a **self-dispersible** coloring agent. As adding sugar to an already sweetened cookie recipe may produce undesirable results, adding a surfactant which acts as a dispersant to an ink composition that already has a self-dispersible coloring agent may similarly produce undesirable results. The only surfactant that one of skill in the art would even contemplate adding to the **self-dispersible** colorant composition of Sanada (based on the references cited) are the surfactants taught by Sanada as being usable with such **self-dispersible** colorant compositions. The addition of **any** surfactant **not specifically disclosed as being usable with a self-dispersible colorant** would produce inconsistent and unknown results **without a reasonable expectation of success**. As such, one of skill in the art would **not**

be motivated to use a surfactant disclosed for use with a **non-self-dispersible** coloring agent (i.e., that of Ikemoto) with the **self-dispersible** colorant disclosed in Sanada.

This is not to say that **only** the surfactants listed in Sanada could be used. Rather, only surfactants which have been disclosed as usable with **self-dispersible** coloring agents can be used. Since the surfactant of Ikemoto is **not** disclosed as being usable with a self-dispersible coloring agent, one of skill in the art would **not** combine the surfactant of Ikemoto with the composition of Sanada.

D. Conclusion

Since the references cited by the Examiner (a) fail to teach or suggest a propylene-glycol ether, let alone the specific propylene-glycol ether of Claim 13, (b) fail to teach or suggest a self-dispersible coloring agent **and** a surfactant represented by the following general formula (3), and (c) there is no motivation to combine the references and no reasonable expectation of success of the combination, we respectfully assert that Examiner has failed to establish a prima facie case of obviousness of independent Claim 13, and corresponding Claims 15-18 as they are ultimately dependent from Claim 13. Therefore, we propose respectfully requesting that Examiner remove the rejections of Claims 13 and 15-18 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application No. 2003/0195275 to Sanada et al. in view of JP 2001-081372 to Ikemoto et al.

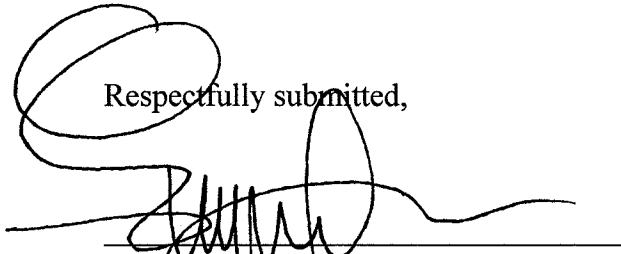
III. REJECTION OF CLAIMS 19 AND 20 UNDER 35 U.S.C. §103(A) BASED ON SANADA IN VIEW OF IKEMOTO AND HORII

On page 3 of the current Office Action, the Examiner rejects Claims 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Sanada in view of Ikemoto and Horii. These rejections are respectfully traversed and believed overcome in view of the following discussion.

Claims 19 and 20 are each ultimately dependent from Claim 13. As Claim 13 is allowable, so must be Claims 19 and 20. Therefore, we propose respectfully requesting that Examiner remove the rejections of Claims 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Pub. No. 2003/0195275 to Sanada et al. in view of JP 2001-081372 to Ikemoto et al., and further in view of U.S. Patent No. 6,871,941 to Horii et al.

Based upon the above remarks, Applicant respectfully requests reconsideration of this application and its early allowance. Should the Examiner feel that a telephone conference with Applicant's attorney would expedite the prosecution of this application, the Examiner is urged to contact him at the number indicated below.

Respectfully submitted,



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